```matlab
% Fixed-Point Method for function A
clc;
clear all;

% Inputs: p0, tol, N0
tol = 1e-5;  % error tolerance
N0 = 5000;    % maximum number of iteration
v0= [0.5;0.6;0.6];     % starting point
l= 0;

% Start Iterating
j = 1;
w = v0;
v = w;
A = [5.8847 -5.98605 1.22255;-5.98605 1.95894 3.21168;1.22255 3.21168 -4.54613];

while j < N0

  w = A*v0;
  v = w/norm(w);
  l= transpose(v)*A*v;
  if norm(A*v-l*v)/norm(l*v)<tol
      % close enough to actual root, stop
      break;
  else
      v0=v;
      j = j + 1;
  end

end

fprintf('Iteration number = %d \n', j);
fprintf('v = %.4f \n',v);
fprintf('l = %.4f \n',l);
fprintf('Error = %.4f \n', norm(A*v-l*v)/norm(l*v));
```